The Solar and Interplanetary Causes of Geomagnetic Activity: A Historic Review

<u>B. T. Tsurutani</u> (Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA 91109; 818-354-7559; e-mail: btsurutani@jplsp.jpl.nasa.gov.
Walter D. Gonzalez, INPE-Caixa Postal 515, 12200 Sao Jose Dos Campos, Sao Paulo, Brazil

A historical review of the solar and interplanetary causes of: intense magnetic storms, ~25 day recurring moderate intensity storms, continuous substorms and geomagnetic quiet will be presented. Space-age plasma physicists have demonstrated that the process of magnetic reconnection between interplanetary magnetic fields and the Earth's magnetic fields can explain all of the geomagnetic phenomena listed above.